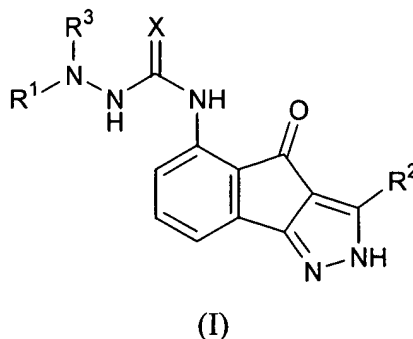


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A compound according to formula (I):



X is selected from O or S;

R<sup>1</sup> is selected from the groups: C<sub>3</sub>-C<sub>10</sub> membered carbocycle substituted with 0-5 R<sup>4</sup>, and 3-10 membered heterocycle substituted with 0-5 R<sup>5</sup>, provided that if R<sup>1</sup> is phenyl then R<sup>1</sup> is substituted with 1-5 R<sup>4</sup>;

R<sup>2</sup> is selected from the groups: H, C<sub>1</sub>-<sub>10</sub> alkyl substituted with 0-3 R<sup>6</sup>, C<sub>2</sub>-<sub>10</sub> alkenyl substituted with 0-3 R<sup>6</sup>, C<sub>2</sub>-<sub>10</sub> alkynyl substituted with 0-3 R<sup>6</sup>, -(CF<sub>2</sub>)<sub>m</sub>CF<sub>3</sub>, C<sub>3</sub>-<sub>10</sub> membered carbocycle substituted with 0-5 R<sup>4</sup>, and 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5 R<sup>5</sup>;

R<sup>3</sup> is selected from the groups: H, C<sub>1</sub>-<sub>4</sub> alkyl, C<sub>3</sub>-<sub>6</sub> cycloalkyl, or C<sub>4</sub>-<sub>10</sub> cycloalkylalkyl;

R<sup>4</sup> is independently selected from the groups: halo, -CN, NO<sub>2</sub>, C<sub>1</sub>-<sub>4</sub> alkyl, C<sub>1</sub>-<sub>4</sub> haloalkyl, NR<sup>7</sup>R<sup>7a</sup>, =O, OR<sup>7</sup>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7a</sup>, NHC(O)NR<sup>7</sup>R<sup>7a</sup>, NHC(S)NR<sup>7</sup>R<sup>7a</sup>,

$\text{NR}^7\text{C}(\text{O})\text{OR}^{7b}$ ,  $\text{NR}^7\text{C}(\text{O})\text{R}^{7b}$ ,  $\text{SO}_2\text{NR}^7\text{R}^{7a}$ ,  $\text{SO}_2\text{R}^{7b}$ , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;

alternatively, when two  $\text{R}^4$ 's are present on adjacent carbon atoms they combine to form - $\text{OCH}_2\text{O}$ - or - $\text{OCH}_2\text{CH}_2\text{O}$ -;

$\text{R}^5$  is independently selected from the groups: halo, -CN,  $\text{NO}_2$ , C<sub>1-4</sub> alkyl, C<sub>1-4</sub> haloalkyl,  $\text{NR}^7\text{R}^{7a}$ ,  $\text{NR}^7\text{C}(\text{O})\text{OR}^{7b}$ ,  $\text{NR}^7\text{C}(\text{O})\text{R}^{7b}$ ,  $\text{OR}^7$ ,  $\text{COR}^7$ ,  $\text{CO}_2\text{R}^7$ ,  $\text{CONR}^7\text{R}^{7a}$ ,  $\text{CON}(\text{R}^9)[(\text{CH}_2)_m\text{R}^{10}]$ ,  $\text{CO}(\text{CH}_2)_m\text{R}^{10}$ ,  $\text{NHC}(\text{O})\text{NR}^7\text{R}^{7a}$ ,  $\text{NHC}(\text{S})\text{NR}^7\text{R}^{7a}$ ,  $\text{SO}_2\text{NR}^7\text{R}^{7a}$ , and  $\text{SO}_2\text{R}^{7b}$ ;

$\text{R}^6$  is independently selected from the groups: halo, -CN,  $\text{NO}_2$ , C<sub>1-4</sub> alkyl, C<sub>1-4</sub> haloalkyl,  $\text{NR}^7\text{R}^{7a}$ ,  $\text{NR}^8\text{NR}^8\text{R}^{8a}$ ,  $\text{NR}^7\text{C}(\text{O})\text{OR}^7$ ,  $\text{NR}^7\text{C}(\text{O})\text{R}^{7b}$ ,  $=\text{O}$ ,  $\text{OR}^7$ ,  $\text{COR}^7$ ,  $\text{CO}_2\text{R}^7$ ,  $\text{CONR}^7\text{R}^{7a}$ ,  $\text{NHC}(\text{O})\text{NR}^7\text{R}^{7a}$ ,  $\text{NHC}(\text{S})\text{NR}^7\text{R}^{7a}$ ,  $\text{SO}_2\text{NR}^7\text{R}^{7a}$ ,  $\text{SO}_2\text{R}^{7b}$ , C<sub>3-10</sub> membered carbocycle substituted with 0-5  $\text{R}^4$ , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3  $\text{R}^7$ ;

$\text{R}^7$  is independently selected from the groups: H, halo, -CN,  $\text{NO}_2$ , C<sub>1-4</sub> haloalkyl,  $\text{R}^8\text{R}^{8a}\text{N}(\text{CR}^9\text{R}^{9a})_m$ ,  $\text{NR}^8\text{NR}^8\text{R}^{8a}$ ,  $\text{NR}^8\text{C}(\text{O})\text{OR}^8$ ,  $\text{NR}^8\text{C}(\text{O})\text{R}^8$ ,  $=\text{O}$ ,  $\text{R}^8\text{O}(\text{CR}^9\text{R}^{9a})_m$ ,  $\text{COR}^8$ ,  $\text{CO}_2\text{R}^8$ ,  $\text{CONR}^8\text{R}^{8a}$ ,  $\text{NHC}(\text{O})\text{NR}^8\text{R}^{8a}$ ,  $\text{NHC}(\text{S})\text{NR}^8\text{R}^{8a}$ ,  $\text{SO}_2\text{NR}^8\text{R}^{8a}$ ,  $\text{SO}_2\text{R}^{8b}$ , C<sub>1-4</sub>alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>4-10</sub>cycloalkylalkyl, phenyl, and benzyl;

$\text{R}^{7a}$  is independently selected from the groups: H, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, phenyl, and benzyl;

alternatively,  $\text{R}^7$  and  $\text{R}^{7a}$ , together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3  $\text{R}^{7c}$ ;

$\text{R}^{7b}$  is independently selected from the groups: H, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, phenyl, and benzyl;

$R^{7c}$  is independently selected from the groups: halo, -CN,  $N_3$ ,  $NO_2$ ,  $C_{1-4}$  alkyl,  $C_{3-6}$  cycloalkyl,  $C_{4-10}$  cycloalkylalkyl,  $C_{1-4}$  haloalkyl,  $NR^7R^{7b}$ ,  $R^8R^{8a}N(CR^9R^{9a})_m$ , =O,  $OR^7$ ,  $R^8O(CR^9R^{9a})_m$ ,  $COR^7$ ,  $CO_2R^7$ ,  $CONR^7R^{7b}$ ,  $NHC(O)NR^7R^{7b}$ ,  $NHC(S)NR^7R^{7b}$ ,  $NR^7C(O)OR^{7b}$ ,  $NR^7C(O)R^{7b}$ ,  $C(=NR^8)R^{8a}$ ,  $C(=NR^8)NR^{8a}R^{8b}$ ,  $SO_2NR^7R^{7b}$ ,  $SO_2R^{7b}$ , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S;  
 $R^8$  is independently selected from the groups: H,  $C_{1-4}$  alkyl,  $C_{3-6}$  cycloalkyl,  $C_{4-10}$  cycloalkylalkyl, phenyl and benzyl;

$R^{8a}$  is independently selected from the groups: H,  $C_{1-4}$  alkyl,  $C_{3-6}$  cycloalkyl,  $C_{4-10}$  cycloalkylalkyl, phenyl and benzyl;

alternatively,  $R^8$  and  $R^{8a}$ , together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom;

$R^{8b}$  is independently selected from the groups: H,  $C_{1-4}$  alkyl,  $C_{3-6}$  cycloalkyl,  $C_{4-10}$  cycloalkylalkyl, phenyl and benzyl;

$R^9$  is independently selected from the groups: H,  $C_{1-4}$  alkyl;

$R^{9a}$  is independently selected from the groups: H,  $C_{1-4}$  alkyl;

$R^{10}$  is independently selected from the groups:  $NR^7R^{7a}$ ,  $C_{3-10}$  membered carbocycle substituted with 0-3  $R^7$ , and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, substituted with 0-3  $R^7$ ; and

m is independently selected from 0, 1, 2, 3, and 4;

or a pharmaceutically acceptable salt thereof, ~~a pharmaceutically acceptable prodrug form thereof~~, an N-oxide form thereof, or a stereoisomer thereof.

Claim 2 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is selected from the groups: C<sub>5</sub>-C<sub>6</sub> membered carbocycle substituted with 0-5  $R^4$ , and 5-6 membered heterocycle substituted with 0-5  $R^5$ .

Claim 3 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered carbocycle substituted with 0-5  $R^4$ , wherein the carbocycle is an aryl, cycloalkyl, or cycloalkenyl group.

Claim 4 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is phenyl substituted with 0-5  $R^4$ .

Claim 5 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered cycloalkyl group substituted with 0-5  $R^4$ , wherein the cycloalkyl is cyclohexyl, cyclopentyl.

Claim 6 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered cycloalkenyl group substituted with 0-5  $R^4$ , wherein the cycloalkenyl group is cyclohexenyl, cyclopentenyl.

Claim 7 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>7</sub> membered heterocycle substituted with 0-5  $R^5$ , wherein the heterocycle is a heteroaryl, heterocyclenyl, or heterocyclyl group.

Claim 8 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered heteroaryl substituted with 0-5  $R^5$ , wherein the heteroaryl is pyrazinyl, thienyl, isothiazolyl, oxazolyl, pyrazolyl, furazanyl, pyrrolyl, 1,2,4-thiadiazolyl, pyridazinyl, quinoxaliny, phthalazinyl, imidazo[1,2-a]pyridine, imidazo[2,1-b]thiazolyl, benzofurazanyl, azaindolyl, benzimidazolyl, benzothienyl, thienopyridyl, thienopyrimidyl, pyrrolopyridyl, imidazopyridyl, benzoazaindole, 1,2,4-triazinyl, benzthiazolyl, furanyl, imidazolyl, indolyl, indoliziny, isoxazolyl, isoquinoliny, isothiazolyl, oxadiazolyl, pyrazinyl, pyridazinyl, pyrazolyl, pyridyl, pyrimidinyl, pyrrolyl, quinazoliny, quinoliny, 1,3,4-thiadiazolyl, thiazolyl, thienyl or triazolyl.

Claim 9 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered heteroaryl substituted with 0-5  $R^5$ , wherein the heteroaryl is pyrazinyl, pyridazinyl, pyridyl, pyrimidinyl, thiazolyl or thienyl.

Claim 10 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered heterocyclyl substituted with 0-5  $R^5$ , wherein the heterocyclyl is tetrahydropyranyl, pyrrolidinyl, imidazolidinyl, pyrazolidinyl, piperidinyl, morpholiny, thiomorpholiny, or piperazinyl.

Claim 11 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered heterocyclyl substituted with 0-5  $R^5$ , wherein the heterocyclyl is tetrahydropyranyl or morpholiny.

Claim 12 (original): A compound according to claim 1, wherein:

X is O;

$R^1$  is a C<sub>5</sub>-C<sub>6</sub> membered heterocyclenyl group substituted with 0-5  $R^5$ , wherein the heterocyclenyl group is 1,2,3,4- tetrahydrohydropyridine, 1,2-dihydropyridyl, 1,4-dihydropyridyl, 1,2,3,6-tetrahydropyridine, 1,4,5,6-tetrahydropyrimidine, 2-pyrrolinyl, 3-pyrrolinyl, 2-imidazolynyl, 2-pyrazolynyl, 3,4-dihydro-2*H*-pyran, or dihydrofuranyl.

Claim 13 (original): A compound according to claim 1, wherein:

X is O;

$R^3$  is selected from the groups: H, C<sub>1-4</sub> alkyl.

Claim 14 (original): A compound according to claim 1, wherein:

X is O;

$R^3$  is methyl.

Claim 15 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>3</sub>-10 membered carbocycle substituted with 0-5  $R^4$ , or a 3-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S and substituted with 0-5  $R^5$ .

Claim 16 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is C<sub>5</sub>-C<sub>6</sub> membered carbocycle substituted with 0-5  $R^4$ , wherein the carbocycle is an aryl, cycloalkyl, or cycloalkenyl group.

Claim 17 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is phenyl substituted with 0-5  $R^4$ .

Claim 18 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is cycloalkyl substituted with 0-5  $R^4$ , a C<sub>5</sub>-C<sub>6</sub> membered cycloalkyl group substituted with 0-5  $R^4$ , wherein the cycloalkyl is cyclohexyl, cyclopentyl.

Claim 19 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>6</sub> membered cycloalkenyl group substituted with 0-5  $R^4$ , wherein the cycloalkenyl group is cyclohexenyl, cyclopentenyl.

Claim 20 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>7</sub> membered heterocycle substituted with 0-5  $R^5$ , wherein the heterocycle is a heteroaryl, heterocyclenyl, or heterocyclyl group.

Claim 21 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>6</sub> membered heteroaryl substituted with 0-5  $R^5$ , wherein the heteroaryl is pyrazinyl, thienyl, isothiazolyl, oxazolyl, pyrazolyl, furazanyl, pyrrolyl, 1,2,4-thiadiazolyl, pyridazinyl, quinoxaliny, phthalazinyl, imidazo[1,2-a]pyridine, imidazo[2,1-b]thiazolyl, benzofurazanyl, azaindolyl, benzimidazolyl, benzothienyl, thienopyridyl, thienopyrimidyl, pyrrolopyridyl, imidazopyridyl, benzoazaindole, 1,2,4-triazinyl, benzthiazolyl, furanyl, imidazolyl, indolyl, indoliziny, isoxazolyl, isoquinoliny, isothiazolyl, oxadiazolyl, pyrazinyl,

pyridazinyl, pyrazolyl, pyridyl, pyrimidinyl, pyrrolyl, quinazolinyl, quinolinyl, 1,3,4-thiadiazolyl, thiazolyl, thienyl or triazolyl.

Claim 22 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>6</sub> membered heteroaryl substituted with 0-5  $R^5$ , wherein the heteroaryl is pyrazinyl, pyridazinyl, pyridyl, pyrimidinyl, thiazolyl or thienyl.

Claim 23 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>6</sub> membered heterocyclyl substituted with 0-5  $R^5$ , wherein the heterocyclyl is tetrahydropyranyl, pyrrolidinyl, imidazolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, thiomorpholinyl, or piperazinyl.

Claim 24 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is a C<sub>5</sub>-C<sub>6</sub> membered heterocyclenyl group substituted with 0-5  $R^5$ , wherein the heterocyclenyl group is 1,2,3,4- tetrahydrohydropyridine, 1,2-dihydropyridyl, 1,4-dihydropyridyl, 1,2,3,6-tetrahydropyridine, 1,4,5,6-tetrahydropyrimidine, 2-pyrrolinyl, 3-pyrrolinyl, 2-imidazolinyl, 2-pyrazolinyl, 3,4-dihydro-2*H*-pyran, or dihydrofuranyl.

Claim 25 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is phenyl substituted with 1-5  $R^4$ .

Claim 26 (original): A compound according to claim 1, wherein:

X is O;

$R^2$  is phenyl substituted with 1-4  $R^4$ .



Claim 27 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with 1-3 R<sup>4</sup>.

Claim 28 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with 1-2 R<sup>4</sup>.

Claim 29 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is a 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S, wherein the heterocycle is a heteroaryl, heterocyclenyl, or heterocyclyl group.

Claim 30 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is a 5-6 membered heteroaryl containing from 1-4 heteroatoms selected from O, N, and S, which is substituted with 0-5 R<sup>5</sup>.

Claim 31 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>.

Claim 32 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>;

R<sup>7</sup> and R<sup>7a</sup>, together with the atoms to which they are attached, form a heterocycle having 4-8 atoms in the ring and containing an additional 0-1 N, S, or O atom and substituted with 0-3 R<sup>7c</sup>; and

R<sup>7c</sup> is independently selected from the groups: halo, -CN, N<sub>3</sub>, NO<sub>2</sub>, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, C<sub>1-4</sub> haloalkyl, NR<sup>7</sup>R<sup>7b</sup>, R<sup>8</sup>R<sup>8a</sup>N(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, =O, OR<sup>7</sup>, R<sup>8</sup>O(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7b</sup>, NHC(O)NR<sup>7</sup>R<sup>7b</sup>, NHC(S)NR<sup>7</sup>R<sup>7b</sup>, NR<sup>7</sup>C(O)OR<sup>7b</sup>, NR<sup>7</sup>C(O)R<sup>7b</sup>, C(=NR<sup>8</sup>)R<sup>8a</sup>, C(=NR<sup>8</sup>)NR<sup>8a</sup>R<sup>8b</sup>, SO<sub>2</sub>NR<sup>7</sup>R<sup>7b</sup>, SO<sub>2</sub>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 33 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>;

R<sup>7</sup> and R<sup>7a</sup>, together with the atoms to which they are attached, form a heterocycle having 6-7 atoms in the ring and containing an additional 0-1 N atoms and substituted with 0-3 R<sup>7c</sup>; and

R<sup>7c</sup> is independently selected from the groups: halo, -CN, N<sub>3</sub>, NO<sub>2</sub>, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, C<sub>1-4</sub> haloalkyl, NR<sup>7</sup>R<sup>7b</sup>, R<sup>8</sup>R<sup>8a</sup>N(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, =O, OR<sup>7</sup>, R<sup>8</sup>O(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7b</sup>, NHC(O)NR<sup>7</sup>R<sup>7b</sup>, NHC(S)NR<sup>7</sup>R<sup>7b</sup>, NR<sup>7</sup>C(O)OR<sup>7b</sup>, NR<sup>7</sup>C(O)R<sup>7b</sup>, C(=NR<sup>8</sup>)R<sup>8a</sup>, C(=NR<sup>8</sup>)NR<sup>8a</sup>R<sup>8b</sup>, SO<sub>2</sub>NR<sup>7</sup>R<sup>7b</sup>, SO<sub>2</sub>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 34 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>;

R<sup>7</sup> and R<sup>7a</sup>, together with the atoms to which they are attached, form a 6-7 membered heterocyclcyl group or a 6-7 membered heterocyclcyl group, substituted with 0-3 R<sup>7c</sup>; and

R<sup>7c</sup> is independently selected from the groups: halo, -CN, N<sub>3</sub>, NO<sub>2</sub>, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, C<sub>1-4</sub> haloalkyl, NR<sup>7</sup>R<sup>7b</sup>, R<sup>8</sup>R<sup>8a</sup>N(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, =O, OR<sup>7</sup>, R<sup>8</sup>O(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7b</sup>, NHC(O)NR<sup>7</sup>R<sup>7b</sup>, NHC(S)NR<sup>7</sup>R<sup>7b</sup>, NR<sup>7</sup>C(O)OR<sup>7b</sup>, NR<sup>7</sup>C(O)R<sup>7b</sup>, C(=NR<sup>8</sup>)R<sup>8a</sup>, C(=NR<sup>8</sup>)NR<sup>8a</sup>R<sup>8b</sup>, SO<sub>2</sub>NR<sup>7</sup>R<sup>7b</sup>, SO<sub>2</sub>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 35 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>;

R<sup>7</sup> and R<sup>7a</sup>, together with the atoms to which they are attached, form a 6-7 membered heterocyclcyl group substituted with 0-3 R<sup>7c</sup>, wherein the heterocyclcyl group is piperazinyl, or homopiperazinyl, and

R<sup>7c</sup> is independently selected from the groups: halo, -CN, N<sub>3</sub>, NO<sub>2</sub>, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, C<sub>1-4</sub> haloalkyl, NR<sup>7</sup>R<sup>7b</sup>, R<sup>8</sup>R<sup>8a</sup>N(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, =O, OR<sup>7</sup>, R<sup>8</sup>O(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7b</sup>, NHC(O)NR<sup>7</sup>R<sup>7b</sup>, NHC(S)NR<sup>7</sup>R<sup>7b</sup>, NR<sup>7</sup>C(O)OR<sup>7b</sup>, NR<sup>7</sup>C(O)R<sup>7b</sup>, C(=NR<sup>8</sup>)R<sup>8a</sup>, C(=NR<sup>8</sup>)NR<sup>8a</sup>R<sup>8b</sup>, SO<sub>2</sub>NR<sup>7</sup>R<sup>7b</sup>, SO<sub>2</sub>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 36 (original): A compound according to claim 1, wherein:

X is O;

R<sup>2</sup> is phenyl substituted with R<sup>4</sup>;

R<sup>4</sup> is NR<sup>7</sup>R<sup>7a</sup>;

R<sup>7</sup> and R<sup>7a</sup>, together with the atoms to which they are attached, form a 6-7 membered heterocyclenyl group substituted with 0-3 R<sup>7c</sup>, wherein the heterocyclenyl group is ,2,3,4-tetrahydrohydropyridine, 1,2-dihydropyridyl, 1,4-dihydropyridyl, 1,2,3,6-tetrahydropyridine, or 1,4,5,6-tetrahydropyrimidine; and

R<sup>7c</sup> is independently selected from the groups: halo, -CN, N<sub>3</sub>, NO<sub>2</sub>, C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, C<sub>1-4</sub> haloalkyl, NR<sup>7</sup>R<sup>7b</sup>, R<sup>8</sup>R<sup>8a</sup>N(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, =O, OR<sup>7</sup>, R<sup>8</sup>O(CR<sup>9</sup>R<sup>9a</sup>)<sub>m</sub>, COR<sup>7</sup>, CO<sub>2</sub>R<sup>7</sup>, CONR<sup>7</sup>R<sup>7b</sup>, NHC(O)NR<sup>7</sup>R<sup>7b</sup>, NHC(S)NR<sup>7</sup>R<sup>7b</sup>, NR<sup>7</sup>C(O)OR<sup>7b</sup>, NR<sup>7</sup>C(O)R<sup>7b</sup>, C(=NR<sup>8</sup>)R<sup>8a</sup>, C(=NR<sup>8</sup>)NR<sup>8a</sup>R<sup>8b</sup>, SO<sub>2</sub>NR<sup>7</sup>R<sup>7b</sup>, SO<sub>2</sub>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 37 (original): A compound according to claim 1, wherein:

R<sup>7c</sup> is independently selected from the groups: C<sub>1-4</sub> alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>4-10</sub> cycloalkylalkyl, NR<sup>7</sup>R<sup>7b</sup>, and 5-10 membered heterocycle containing from 1-4 heteroatoms selected from O, N, and S.

Claim 38 (original): A compound according to claim 1, wherein the compound is selected from:

3-(4-piperazinophenyl)-5-((N-methyl- N-(2-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl- N-(2-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-homopiperazinophenyl)-5-((N-methyl- N-(2-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylhomopiperazino)phenyl)-5-((N-methyl- N-(2-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(4-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(2-pyrazinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(2-pyrimidinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(2-thiazolyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(3-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(2-pyrazinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(2-thiazolyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(3-pyridinyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-ethylpiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-isopropylpiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-piperazinophenyl)-5-((N-methyl-N-cyclohexylamino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-ethylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-isopropylpiperazino)phenyl)-5-((N-methyl-N-cyclohexylamino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-piperazinophenyl)-5-((N-methyl-N-(1-methylpiperidin-4-yl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-homopiperazinophenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;

3-(4-(4-methylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-ethylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-isopropylhomopiperazino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-(N,N-dimethylamino)piperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-pyrrolidinopiperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(4-(4-piperidinopiperidino)phenyl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)-indeno[1,2-c]pyrazol-4-one;

3-(2,4-dimethylthiazol-5-yl)-5-((N-methyl-N-(4-tetrahydropyranyl)amino)carbamoylamino)indeno[1,2-c]pyrazol-4-one;  
or pharmaceutically acceptable salt form thereof.

Claim 39 (withdrawn): A pharmaceutical composition, comprising a pharmaceutically acceptable carrier, a compound according to claim 1 or a pharmaceutically acceptable salt or prodrug form thereof, and a cytostatic or cytotoxic agent.

Claims 40-47 (cancelled)

Claim 48 (withdrawn): A method of treating cancer associated with CDK activity in a patient in need thereof, comprising administering to said patient a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, in combination (administered together or sequentially) with known anti-cancer treatments such as radiation therapy or with cytostatic or cytotoxic agents, wherein such agents are selected from the group consisting of: DNA interactive agents, such as cisplatin or doxorubicin; topoisomerase II inhibitors, such as etoposide; topoisomerase I inhibitors such as CPT-11 or topotecan; tubulin interacting agents, such as paclitaxel, docetaxel or the epothilones; hormonal agents, such as tamoxifen; thymidilate synthase inhibitors, such as 5-fluorouracil; and anti-metabolites, such as methotrexate.

Claim 49 (withdrawn): A method treating cell proliferative diseases associated with CDK activity in a patient in need thereof, comprising administering to said patient a pharmaceutically effective amount of a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, in combination (administered together or sequentially) with known anti-proliferating agents selected from the group consisting of: altretamine, busulfan, chlorambucil, cyclophosphamide, ifosfamide, mechlorethamine, melphalan, thiotepa, cladribine, fluorouracil, floxuridine, gemcitabine, thioguanine, pentostatin, methotrexate, 6-mercaptopurine, cytarabine, carmustine, lomustine, streptozotocin, carboplatin, cisplatin, oxaliplatin, iproplatin, tetraplatin, lobaplatin, JM216, JM335, fludarabine, aminoglutethimide, flutamide, goserelin, leuprolide, megestrol acetate, cyproterone acetate, tamoxifen, anastrozole, bicalutamide, dexamethasone, diethylstilbestrol, prednisone, bleomycin, dactinomycin, daunorubicin, doxorubicin, idarubicin, mitoxantrone, losoxantrone, mitomycin-c, plicamycin, paclitaxel, docetaxel, CPT-11, epothilones, topotecan, irinotecan, 9-amino camptothecin, 9-nitro camptothecin, GS-211, etoposide, teniposide, vinblastine, vincristine, vinorelbine, procarbazine, asparaginase, pegaspargase, methotrexate, octreotide, estramustine, and hydroxyurea.



Claims 50-58 (cancelled)

Claim 59 (withdrawn): A pharmaceutical kit for treating a cell proliferative disease associated with CDK activity, said kit comprising a plurality of separate containers, wherein at least one of said containers contains a compound according to claim 1, or a pharmaceutically acceptable salt or prodrug form thereof, and at least another of said containers contains one or more compounds selected from the group consisting of cytostatic or cytotoxic agents, such as for example, but not limited to, DNA interactive agents, such as carboplatin, cisplatin or doxorubicin; topoisomerase II inhibitors, such as etoposide; topoisomerase I inhibitors such as CPT-11 or topotecan; tubulin interacting agents, such as paclitaxel, taxane, docetaxel or the epothilones; hormonal agents, such as tamoxifen; thymidilate synthase inhibitors, such as 5-fluorouracil; and anti-metabolites, such as methotrexate, and said containers optionally contain a pharmaceutical carrier, which kit may be effectively utilized for carrying out combination therapies according to the invention.

Claim 60 (new): A method of inhibiting CDK activity selected from the group consisting of cdk4/D1 kinase complexes, cdk2/E kinase complexes and combinations thereof, comprising administering a pharmaceutically effective amount of a compound according to claim 1 or a pharmaceutically acceptable salt thereof.

Claim 61 (new): A method of inhibiting HCT116 cancer cell proliferation, comprising administering a pharmaceutically effective amount of a compound according to claim 1 or a pharmaceutically acceptable salt thereof.